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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Leif Brunstrom

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EXAMINER

HERNANDEZ, NELSON D

ART UNIT

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2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,693	Applicant(s) BRUNSTROM ET AL.	
	Examiner Nelson D. Hernández Hernández	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specifications

1. The Examiner acknowledges the amendments made to the title. The amendments made are accepted.

Response to Amendment

2. The Examiner acknowledges the amended claims filed on June 23, 2008.

Claims 1-9 have been amended. **Claims 10-15** have been cancelled.

3. The Examiner noted that the claims have been amended to delete the drawing reference numbers. The Examiner noted that the reference number "(1)" in claim 4 was not deleted. Was the reference number "(1)" in claim 4 also meant to be deleted?

Response to Arguments

4. Applicant's arguments, see pages 6-7, filed June 23, 2008, with respect to the rejection of claim 1 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of newly found prior art.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umezawa et al., US Patent 5,491,507 in view of Nozawa et al., US Patent 6,339,508 B1.

Regarding claim 1, Umezawa et al. discloses a portable communication apparatus (See fig. 13) comprising: a first housing portion (Fig. 13: 49) and a second housing portion (Fig. 13: 50), a rotary support member (Fig. 1: hinges 51a and 51b) rotatably connecting the first housing portion and the second housing portion (See fig. 13), an image producing apparatus (Fig. 13: 61), an optical input for the image producing apparatus located in the support member (the complete camera system is located in the rotary support member; see figs. 13, 15 and 16) (Col. 14, line 62 – col. 15, line 51).

Umezawa et al. does not explicitly disclose that the image producing apparatus is located in the first housing portion or the second housing portion of the portable communication apparatus, and an optical arrangement extends an optical path of the image producing apparatus from the first housing portion or the second housing portion to the optical input located in the rotary support member.

However, Nozawa et al. discloses a cell phone (Figs. 24-26) comprising an image producing apparatus (See fig. 26), an optical input (Fig. 25: 55) for the image producing apparatus located in the body of the cell phone, characterized in that the image producing apparatus (See fig. 26) is located in the body of said cell phone (See figs. 24-26), and an optical arrangement (Fig. 26) extends an optical path of the image producing apparatus from a particular location of the body of said cell phone to a second location along the length of the body of said cell phone (See fig. 26; col. 18, line 49 – col. 19, line 23). Nozawa et al. further discloses that by using the arrangement where a prism (See fig. 26) used as reflection member directs the light entering the lens (Fig. 26: 55) to the image sensor which optical path is perpendicular to said light entering the lens, it would permit to thin the body of the telephone and would also allow to include a plurality of lenses that would help obtaining a focused image (focus lenses as discussed in col. 19, lines 4-6) (col. 18, line 49 – col. 19, line 23).

Although the teaching in Nozawa et al. does not explicitly disclose that the telephone is a foldable type telephone where the lens is located at the hinge of said telephone as shown in the Umezawa et al. reference, after acknowledging the advantages of the optical arrangement in Nozawa et al. where the main lens is located at a particular location and the sensor is located at a different location along the length of the body of the camera where the optical path of the main lens and the sensor are perpendicular in order to allow a considerable size reduction of the image pick-up apparatus and would also allow including more optical elements to focus the image to be captured, one of an ordinary skill in the art would find obvious at the time the

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invention was made to modify the teaching of Umezawa et al. to have the image producing apparatus located in the first housing portion or in the second housing portion of the portable communication apparatus, and to have the optical arrangement to extend an optical path of the image producing apparatus from the first housing portion or the second housing portion to the optical input located in the rotary support member. The motivation to do so would have been to reduce the size of the apparatus and it would also permit to thin the body of the telephone and would also allow including a plurality of lenses that would help obtaining a focused image as suggested by Nozawa et al. (Col. 18, line 49 – col. 19, line 23).

Regarding claim 2, limitations have been discussed and analyzed in claim 1.

Regarding claim 3, the combined teaching of Umezawa et al. in view of Nozawa et al. as discussed and analyzed in claim 3 teach that the optical arrangement comprises a mirror (See Nozawa et al., fig. 21: 48 as shown in a different embodiment). Grounds for rejecting claim 1 apply here.

Regarding claim 4, the combined teaching of Umezawa et al. in view of Nozawa et al. fails to teach that the optical arrangement comprises a light guide. However, Official Notice is taken that the concept of using a light guide such as a fiber optic to direct light of an image to a sensor is well known in the art, an example of that is in the use of flexible cameras such as endoscopes. Therefore, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to modify the prism or mirror as taught in Nozawa et al. with a light guide as an alternative way to direct the

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light to the image sensor by using an optical element that would also allow a considerable reduction of the imaging device.

Regarding claim 5, the combined teaching of Umezawa et al. in view of Nozawa et al. as discussed and analyzed in claim 1 further teaches that the optical input is aimed in a first direction when the communication apparatus is in an open state, and in a second direction when the communication apparatus is in a closed state (Umezawa et al. teaches that the position of the camera is adjusted based on the position of the first housing relative to the position of the second housing as taught in figs. 16(A) and 16(B); col. 16, lines 7-33).

Regarding claim 6, the combined teaching of Umezawa et al. in view of Nozawa et al. as discussed and analyzed in claim 1 further teaches that the image producing apparatus is a video camera (A video camera is taught in the Umezawa reference; see fig. 13: 61).

Regarding claim 7, the combined teaching of Umezawa et al. in view of Nozawa et al. as discussed and analyzed in claim 1 further teaches that the image producing apparatus is a still camera (Fig. 24: 58; Nozawa et al. also discloses that the invention is made for digital still camera, portable telephones, personal computers and so on; col. 1, lines 5-10).

Regarding claim 8, the combined teaching of Umezawa et al. in view of Nozawa et al. as discussed and analyzed in claim 1 further teaches that the portable communication apparatus is a mobile telephone (See Umezawa et al., fig. 13; see also figs. 24-26 in Nozawa et al.).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umezawa et al., US Patent 5,491,507 in view of Nozawa et al., US Patent 6,339,508 B1 and further in view of Nishino et al., US 2001/0005454 A1.

Regarding claim 9, the combined teaching of Umezawa et al. in view of Nozawa et al. fails to teach that the connection between the first housing portion and the rotary support member is fixed, wherein the optical input of the image producing apparatus is rotatably fixed relative to the first housing portion.

However, Nishino et al. discloses a portable communication apparatus (Figs. 9 and 10A-10B) comprising: a first housing portion (Fig. 10A: 1Y) and a second housing portion (Fig. 10A: 1X), a rotary support member (Fig. 10A: 1Z) rotatably connecting the first housing portion and the second housing portion, an image producing apparatus (Fig. 9: 14), and an optical input (Fig. 9: 2) for the image producing apparatus located in the support member (See fig. 10A: 2), characterized in that the connection between the first housing portion (1Y) and the rotary support member (1Z) is fixed (the rotary support 1d as shown in fig. 10B is fixed to the first housing 1X; see page 6, ¶ 0084), wherein the optical input (lens 2 as shown in fig. 10A) of the image producing apparatus (14) is rotatably fixed relative to the first housing portion (as shown in fig. 10, the optical input is part of the hinge portion 1Z which is rotatably fixed to the first housing ("case", 1Y). Therefore, the optical input is rotatably fixed with respect to the first housing.) (Page 6, 0083-0088).

Therefore, taking the combined teaching of Umezawa et al. in view of Nozawa et al. and further in view of Nishino et al. as a whole, it would have been obvious to one of

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an ordinary skill in the art at the time the invention was made to apply the concept of having the rotary portion fixed to the first housing so that when the first housing is rotated, the camera is also rotated relative to the first housing as taught in Nishino et al. to modify the teaching of Umezawa et al. and Nozawa et al. to have the connection between said first housing portion and said rotary support member being fixed, wherein the optical input of the image producing apparatus is rotatably fixed relative to the first housing portion. The motivation to do so would have been to allow the user to capture images of himself or herself while watching the display and also to capture images of another objects depending on the position of the first and second housings as desired by the user.

Conclusion

8. Because new grounds of rejection have been made to reject **claims 1-9**, this Office Action is made **NON FINAL**.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernández Hernández whose telephone number is (571)272-7311. The examiner can normally be reached on 9:00 A.M. to 5:30 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nelson D. Hernández Hernández
Examiner
Art Unit 2622

NDHH
September 29, 2008

/Lin Ye/
Supervisory Patent Examiner, Art Unit 2622